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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/618,307

07/18/2000

Clements C. Lambeth

WEYE115226

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26389 7590 03/07/2007  
CHRISTENSEN, O'CONNOR, JOHNSON, KINDNESS, PLLC  
1420 FIFTH AVENUE  
SUITE 2800  
SEATTLE, WA 98101-2347

EXAMINER

FOX, DAVID T

ART UNIT

PAPER NUMBER

1638

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

03/07/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

# Office Action Summary

Application No.

09/618,307

Applicant(s)

LAMBETH ET AL.

Examiner

David T. Fox

Art Unit

1638

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 20-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-31 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date 18 January 2007.
- ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- ☐ Notice of Informal Patent Application
- ☐ Other: \_\_\_\_\_.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

***Anticipation***

Claims 20, 24 and 27 remain rejected under 35 U.S.C. 102(b) as being anticipated by Hormaza (1999), as stated on pages 2-3 of the last Office action.

Applicant's arguments filed 18 January 2007 have been fully considered but they are not persuasive. Applicant urges that Hormaza fails to teach steps (c) and (e) of claim 20, that Hormaza suggests the use of molecular markers to identify particular traits (and thus fails to suggest the claimed invention), and that the Board of Appeals previously distinguished the instantly claimed invention from the use molecular markers to identify quantitative trait loci.

The Examiner maintains that Hormaza indeed teaches all steps of claim 20, because these steps are broadly defined and claimed. Regarding step (c) of claim 20, page 10 of the specification, lines 27-32 defines "phenotype score" as "the objective measurement of any phenotypic trait or characteristic that is desirable in a plant breeding program". Page 10 of the specification also defines "using objective criteria" as "[including] the measurement of any plant characteristic or phenotype with any detection/measurement device that provides statistically meaningful data" (see, e.g., lines 23-26).

Thus, any visual rating of plant growth or height, or disease reaction; using a numerical scale, or a "0" or "1" rating for presence or absence of a trait; satisfies the criteria set forth in part (c) of step 20, because said numerical ratings can be statistically

processed. It is also noted that the recitation of "including" in the definition of "objective criteria" implies that other definitions are also contemplated.

Regarding step (e) of claim 20, page 17 of the specification, lines 2-3 only defines "an acceptable level of relatedness" as that sufficient to weigh "genetic gain potential against an estimate of inbreeding depression". This is a circular definition which is met by virtually any population of individuals to be used in a breeding program. Furthermore, step (e) of claim 20 as amended merely recites an intended use for the "plurality of elite trees" having inherent properties.

Finally, neither steps (c) nor (e) of claim 20 were actually reduced to practice by Applicant or anyone else, so that no further light can be shed on the vague definitions of the terms which were recited in the specification.

Accordingly, given the vague and general definitions of the terms recited in steps (c) and (e), Hormaza indeed anticipates every element of claim 20 and dependents.

Regarding the alleged failure of Hormaza to suggest the claimed invention, Applicant is reminded that the reference was cited under 35 USC 102 to anticipate rather than render obvious the claimed invention.

Regarding the excerpted Board of Appeals decision as it related to QTLs, the Examiner notes that said excerpt related to the particular evidence cited by the Examiner to support his rejection of the claims under 35 USC 112, first paragraph. Accordingly, said excerpt is not germane to the art rejection at hand.

***Obviousness***

Claims 20-29 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Bridgwater in view of Hormaza (1999), as stated on pages 3-4 of the last Office action.

Applicant's arguments filed 18 January 2007 have been fully considered but they are not persuasive. Applicant urges that there is no motivation to combine the references, given the teaching-away by Bridgwater, the non-analogous teaching by Hormaza of molecular marker association with particular traits, and the failure of any reference to teach steps (c) through (e) of claim 20.

The Examiner maintains that the Board of Appeals firmly stated that Bridgwater provided the motivation to combine polymix breeding and molecular marker analysis of pedigree determination in trees, so that any reference(s) teaching actual molecular methods of determining tree pedigree may be properly combined with Bridgwater to arrive at the instantly claimed invention (see, e.g., pages 12-13 of the Decision of 06 June 2006). The instantly cited Hormaza is equivalent to the secondary and tertiary references cited in the obviousness rejection before the Board, since these references were relied upon to teach the use of molecular markers for tree pedigree analysis, albeit not explicitly in the context of a process comprising the step of polymix breeding.

Furthermore, the Board explicitly refuted the allegation that Bridgwater taught away from the claimed invention (see, e.g., page 13 of the Decision, first and second full paragraphs).

Regarding steps (c) through (e) of claim 20, the Examiner maintains that these steps are indeed taught by both references, as stated above and previously. See also the top of page 13 of the Decision of 06 June 2006, where the Board explicitly stated that Bridgwater suggested step (e) of claim 20.

Claims 20-31 remain rejected under 35 U.S.C. 103(a) as being unpatentable over Bridgwater in view of El-Kassaby et al, further in view of Stoeher et al (1998), as stated on page 3 of the last Office action.

Applicant's arguments filed 18 January 2007 have been fully considered but they are not persuasive. Applicant urges that there is no suggestion to combine the references, that the combination of references fail to teach every element of the claimed invention as amended, and that the Examiner improperly dismissed the evidence of secondary considerations in the form of long-felt need as set forth in the Lambeth declaration of 03 August 2006.

Regarding the alleged lack of suggestion to combine these references, the Examiner again directs Applicant to pages 12-13 of the Decision of 06 June 2006, where this argument has already been addressed and refuted by the Board. Regarding the amendments to part (e) of claim 20, the Examiner maintains that such amendments do not in any meaningful way change the scope of the claimed subject matter or distinguish the claimed invention from the previously cited combination of references.

Regarding the evidence of long-felt need, the Examiner disagrees with Applicant's contention that he merely evaluated such evidence for its "knockdown" value, as asserted in the paragraph bridging pages 10 and 11 of the Response of 18

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January 2007. In accordance with MPEP 716.01(d), the Examiner evaluated the “[f]acts established by the rebuttal evidence” “along with the facts on which the conclusion of a *prima facie* case was reached”; wherein “the record [established] such a strong case of obviousness that the objective evidence of non-obviousness [was] not sufficient to outweigh the evidence of obviousness”. Evidence of the strong case of obviousness was the Decision of 06 June 2006, for example.

Furthermore, Applicant is directed to MPEP 716.04, where it is stated that several factors are considered when weighing evidence of long-felt need, including the failure of other workers to satisfy the need before Applicant’s invention, and a demonstration that the claimed invention actually satisfied the long-felt need. In the instant case, neither of the above two criteria were met.

The Lambeth declaration of 03 August 2006 admitted that other workers had previously combined polymix breeding and pedigree analysis in tree breeding (see, e.g., the paragraph bridging pages 4 and 5 of the declaration, in the discussion of McKeand et al 1992, appended thereto as Attachment F).

Furthermore, Applicant failed to reduce to practice the claimed invention, particularly steps (c) and (e) of claim 20. Accordingly, neither the Examiner nor anyone else is able to determine whether the claimed invention actually satisfied the long-felt need. Applicant alleges that the claimed invention reduces the time and expense involved in the prior methods disclosed by McKeand et al which combined polymix breeding and pedigree analysis. However, in the absence of any data, such an allegation is baseless.

Furthermore, in the context of the requirement of a demonstration that the claimed invention actually succeeded in meeting the long-felt need, the Examiner's statements in the last Office action regarding the pitfalls still present in the claimed method, as established by the references submitted to demonstrate long-felt need, are eminently pertinent.

***Conclusion***

No claim is allowed.

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to David T. Fox whose telephone number is 571-272-0795. The examiner can normally be reached on Monday through Friday from 10:30AM to 7:00PM.

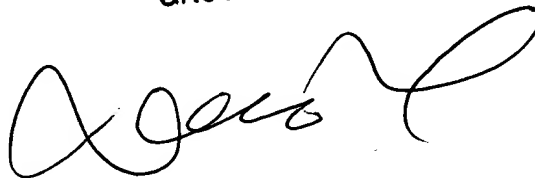


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anne Marie Grunberg, can be reached on 571-272-0975. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

February 21, 2007

DAVID T. FOX  
PRIMARY EXAMINER  
GROUP 180/1638

A handwritten signature in black ink, appearing to read 'David T. Fox', written over the printed name and title.